

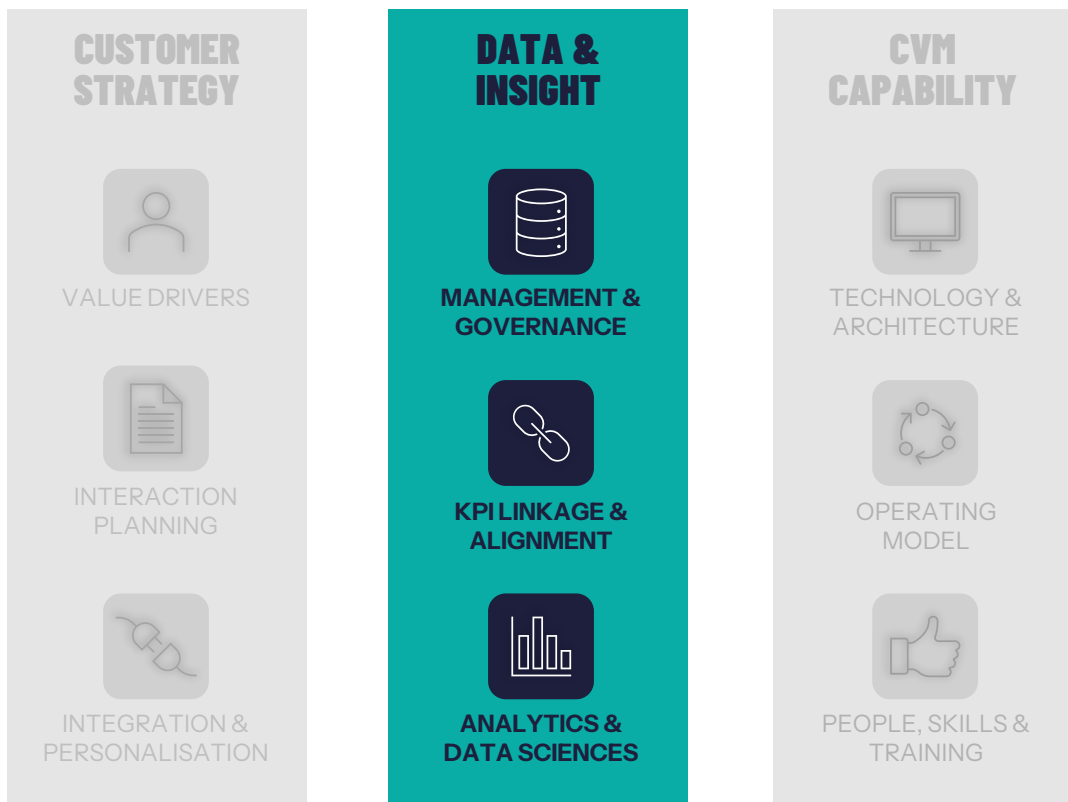
# Data & Insight 201

# CVM MATURITY MODEL

Our consultancy & resourcing services cover all areas of our Customer Value Management maturity model, known as the **9-Box Capability Model**.

In this paper we reveal some of the considerations and how we help brands in the second 3 areas and believe are fundamental to establishing good **Data & Insight capability**.

## 9-BOX CAPABILITY MODEL



# DATA: A CATALYST FOR BUSINESS TRANSFORMATION

In today's data-driven world, organisations are inundated with an unprecedented volume of information. This data, scattered across customer channels, supply chains, and back-office systems, presents both opportunities and challenges.

Effective data management is no longer a luxury but a necessity for survival and growth.

**A successful data strategy requires a clear understanding of business objectives and a well-defined data roadmap.** Organisations must identify specific use cases that can drive cost reduction, revenue growth, or competitive advantage. Without this, data initiatives risk becoming aimless and costly.

**The potential benefits of data-driven decision making are immense.** From enhancing operational efficiency to improving customer satisfaction, data informs strategic choices and drive competitive edge. However, simply accumulating data is not enough; it must be harnessed through strategic planning and analysis.

**Implementing a data strategy may require investment, but long-term costs of inaction are likely to be far greater.** Organisations that fail to leverage their data risk falling behind competitors, losing market share, and missing out on valuable opportunities.

In the era of big data, organisations that can effectively harness and analyse their information will have a significant competitive advantage. By developing a well-thought-out data strategy and focusing on key use cases, businesses can unlock the full potential of their data assets and drive sustainable growth.

To maximise the value of data, organisations should prioritise specific use cases that align with their strategic goals. Common areas for data-driven initiatives include:

## **Trading and Finance**

Accurate reporting, forecasting, and performance analysis.

## **Customer Experience**

Understanding behaviour, segmentation, and new product development.

## **Marketing and CRM**

Targeted campaigns, improved marketing ROI, and customer relationship management.

## **Finance**

Risk reduction, working capital optimisation, and profitability analysis.

## **Operations**

Value chain optimisation, ERP integration, and performance measurement.

## **Customer Service**

Performance management, customer experience measurement, and issue resolution.

A **use case** is a specific scenario or application that demonstrates how data would be used to achieve a particular goal. It outlines the steps involved, the actors (people or systems) interacting with the data, and the expected outcomes.

Key components of a data use case include:

- **Goal:** The desired outcome or objective of the use case.
- **Actors:** The entities (people, systems, or devices) that interact with the data to achieve the goal.
- **Conditions:** The conditions that must be met before the use case can begin and those that should be true after the use case has been completed successfully.
- **Flow of events:** The sequence of steps that occur during the use case, including possible variations or exceptions to the main flow of events.
- **Exceptions:** Errors or unexpected situations that may occur during the use case.

# NAVIGATING THE DATA LANDSCAPE

The data landscape is evolving rapidly, and many roles within organisations are now expected to possess a basic understanding of data concepts. While there may be some disagreement among data experts, here are some key terms to familiarise yourself with:

## **Big Data**

The vast amount of structured and unstructured data generated about behaviour, transactions, interactions, actions, usage, content, status etc. Big data is characterised by greater volume, variety, velocity, veracity and value.

## **Unstructured Data**

Data not organised in a structured format, such as text, images, and social media posts. Analysis often requires advanced techniques like artificial intelligence.

## **Data Lake**

A central repository for storing large volumes of structured and unstructured data. While still valuable, data lakes have become less distinct with the rise of cloud-native data warehouses and data platforms.

## **Data Visualisation**

The use of visual tools to represent data in a clear, understandable and often interactive manner, e.g. through charts, graphs, and dashboards.

## **Data Ethics**

Considerations related to privacy, bias, and fairness in data usage.

## **Data Governance**

The policies, standards, and processes that ensure data quality, security, and compliance.

## **Data Science**

A multidisciplinary field combining statistics, computer science, and domain expertise to extract insights from data. Often used interchangeably with analytics, data science typically involves more complex techniques.

## **Artificial Intelligence (AI)**

The ability of machines to perform tasks that would normally require human intelligence, such as learning, reasoning, and problem-solving. However, not all AI is AI...it could just be marketing hype.

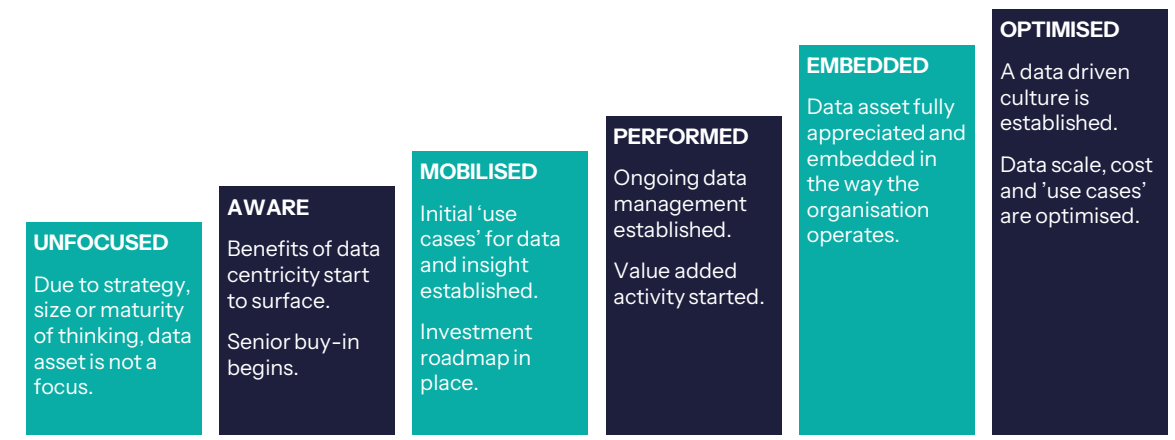
## **Machine Learning**

A common subset of AI within data, which involves training algorithms to identify patterns and make predictions based on data.

As the data landscape continues to evolve, it's essential for professionals to stay updated on emerging trends and technologies. By understanding these key concepts, you can effectively navigate the data-driven world and make more informed decisions.

# DATA & INSIGHT MATURITY

Organisations can be categorised along a maturity model based on how they perceive and manage data. While organisations may exhibit characteristics from multiple stages, this model provides a general framework for identifying areas for improvement.



The investment and focus on the various building blocks of data management vary depending on an organisation's maturity level. However, business changes, such as the implementation of a new ERP system or the development of new marketing capabilities, can also drive the need for additional investment.

## BUILDING BLOCKS OF DATA MANAGEMENT

|  |   |  |
|--|---|--|
| <b>STRATEGY</b><br>Establishing how data will be used to achieve business objectives, and the capabilities required. | <b>GOVERNANCE</b><br>Establishing policies, standards, and processes to ensure data quality, security, and compliance | <b>ARCHITECTURE</b><br>Designing how data is collected, arranged and stored.                     |
| <b>QUALITY</b><br>Ensuring data accuracy, completeness, consistency, and timeliness                                  | <b>INTEGRATION</b><br>Combining data from various sources into a unified view   | <b>ANALYTICS</b><br>Applying statistical and analytical techniques to extract insights from data |
| <b>VISUALISATION</b><br>Presenting data in a clear and understandable format   | <b>SCIENCE</b><br>Utilising advanced techniques to uncover hidden patterns and trends                                 | <b>TOOLS</b><br>Enabling data to be made accessible to the right points in the organisation      |

# ANALYTICS AND REPORTING ENABLE DATA TO BECOME USEFUL

One of the primary consumers of data within organisations is the analytics and reporting function. Often centralised for efficiency and best practices, or decentralised to maintain proximity to specific business areas, these teams have their own use cases.

**Analytics or data science** is typically used to interrogate data, answer ad-hoc questions, and develop insights around, e.g., customer or operational performance.

**Reporting** provides organisations with access to the insights needed to make informed decisions, optimise operations, and drive business growth. It is sometimes known as Management Information (MI) or Business Intelligence (BI) and focuses on replicable insights and typically packaged into dashboards or other visualisations.

By effectively leveraging analytics and reporting, organisations can gain a competitive advantage, improve decision-making, and drive innovation.

Key aspects of analytics and reporting include:



**Data Integration:** Combining data from various internal and external sources to create a unified view of a customer, channel, product, content or action.



**Data Cleaning and Preparation:** Ensuring data quality by identifying and correcting errors, inconsistencies, and missing values.



**Statistical Analysis:** Applying statistical techniques to analyse data, such as descriptive statistics, hypothesis testing, and correlation analysis.



**Predictive Analytics:** Using historical data to forecast future trends and outcomes.



**Data Visualisation:** Creating clear and informative visualisations, such as charts, graphs, and dashboards, to communicate insights to stakeholders.



**Reporting:** Developing regular reports and dashboards to monitor KPIs, surface key insights, and track progress towards business objectives.



**Ad-hoc Analysis:** Answering specific questions or investigating unexpected trends through on-demand analysis.

# ANALYTICS AND REPORTING BEST PRACTICE

## 1. Define Clear Objectives

Clearly articulate the business questions you want to answer through analytics and reporting.

## 2. Choose the Right Tools

Select tools that align with your organisation's needs, budget, and technical expertise.

## 3. Ensure Data Quality

Maintain high data quality standards to ensure accurate and reliable insights.

## 4. Involve Stakeholders

Collaborate with stakeholders to understand their needs and ensure that reports and dashboards meet their requirements.

## 5. Continuously Improve

Regularly review and refine your analytics and reporting processes to stay up-to-date with emerging trends and technologies.

**To effectively leverage analytics and reporting, organisations must invest in a robust set of tools and technologies.**

These tools provide the capabilities needed to extract insights from data, visualise findings, and share information with stakeholders.

**Business Intelligence** (BI) tools provide a user-friendly interface for exploring and analysing data, such as Tableau, Power BI, and Qlik.

**Data Mining** tools use statistical and machine learning techniques to discover patterns and relationships within large datasets.

**Statistical Software** tools like R, KNIME, and Python, offer a wide range of statistical functions and libraries for data analysis.

**Data Visualisation** tools enable the creation of interactive and visually appealing charts, graphs, and dashboards.

Selecting the appropriate toolset for a specific purpose can be challenging, and we've assisted many clients in making informed decisions.



# DATA TALENT: THE HUMAN ELEMENT

While technical skills are essential for data analysis, the ability to translate insights into actionable recommendations is equally crucial. This often requires a combination of technical expertise, domain knowledge, and soft skills.

A **data whisperer** is a term referring to someone (or something) that extracts meaning from complex data sets and can communicate findings in a clear and compelling manner. Whilst typically human, there are AI-powered tools that can go some way towards emulating the 'data whisperer' skillset and provide easy access to complex data.

Data whisperers usually possess a unique blend of technical and interpersonal skills, such as data interpretation and storytelling, which enables the gap between data and business stakeholders to be bridged more effectively. In essence, it is the ability to translate data and insight into actionable recommendations by thinking through the 'why?' and 'so what?'.

Core skills include:

- **Technical Proficiency:** A solid understanding of data analysis tools, statistical methods, and programming languages.
- **Domain Knowledge:** Expertise in the specific industry or domain being analysed.
- **Communication Skills:** The ability to effectively convey complex ideas and insights to both technical and non-technical audiences.
- **Business Acumen:** A strong understanding of business objectives and how data can support strategic decision-making.
- **Curiosity and Critical Thinking:** A natural curiosity and the ability to ask probing questions and challenge assumptions.

Finding someone with the right mix of technical (IT), statistical and commercial skills required to be an exceptional analyst/data scientist can be rare and expensive.

Similar results can often be obtained by forming small, close-knit teams with a complementary blend of the above skills. For example, an effective team could still be formed of a data engineer, a statistical data analyst, a data interpreter, a visualisation specialist, and a storyteller.

# DEVELOPING DATA TALENT

Many organisations are investing in developing their existing talent to cultivate the skills needed for effective data analysis and, ultimately, data whisperers. Organisations should consider a comprehensive training program that covers a range of topics. Here's a suggested development roadmap:

## 1. Foundational Skills

Basic understanding of data concepts, data types, and data quality. Descriptive statistics, probability, and hypothesis testing. Python or R for data manipulation, analysis, and visualisation.

## 2. Data Analysis Techniques

Techniques for handling missing data, outliers, and inconsistencies. Using visualisation and statistical techniques to uncover patterns and insights. Building and evaluating machine learning models for forecasting and prediction. Analysing data collected over time to identify trends and patterns.

## 3. Business Domain Knowledge

Understanding the context and challenges of the organisation's industry. Familiarity with the organisation's operations and workflows. Alignment with the organisation's overall goals and objectives.

## 4. Soft Skills

Storytelling and effective verbal and written communication of complex ideas. Identifying and solving complex problems. Analytical and logical thinking skills. Working effectively with teams and stakeholders.

## 5. Data Visualisation

Selecting appropriate charts and graphs to communicate insights effectively. Designing visually appealing and informative visualisations. Incorporating storytelling elements to enhance the impact of visualisations.

## 6. Mentorship and Coaching

Providing opportunities for mentorship and guidance from experienced data professionals. Assigning practical projects to allow learners to apply their skills and gain hands-on experience.

## 7. Specialised Skills (Optional)

Analysing and understanding text data through Natural Language Processing (NLP). Building and training deep neural networks for complex tasks. Utilising cloud platforms for data storage, processing, and analysis.

These roles provide a solid foundation for individuals to build upon to potentially develop into data whisperers:

**Data Analysts** with experience in data cleaning, preparation, and analysis.

**Business Analysts** who understand business processes and requirements.

**Statisticians** with a strong foundation in statistical methods and analysis.

**Data Engineers** with skills related to data management, infrastructure, and tools.

**Domain Experts** with deep knowledge of a specific industry or business function.

# TRENDS AFFECTING DATA AND INSIGHT

**Data-driven culture:** Fostering a data-driven mindset throughout the organisation, with employees' improving their understanding of data and its value.

**Data Democratisation:** Enabling non-technical users to access and analyse data and providing tools for users to explore data independently.

**Quantum Computing:** Solving complex problems that are difficult for classical computers and developing novel algorithms to leverage the power of quantum computing for data analysis.

**Data Mesh:** Empowering data teams to own and manage their data domains, whilst enabling enhanced control and governance over data assets.

**Explainable AI (XAI):** Making AI models more transparent to understand decision-making processes through explanation of rationale and interpretation of sources.

**Low-Code/No-Code Analytics:** Making data analysis more accessible to non-expert users, e.g., by using chat-style interfaces to ask questions of the data.

**Edge Computing:** Processing data closer to its source for reduced latency and better fit with the specific end-user application.

**IoT Integration:** Analysing data from Internet-of-Things devices (e.g. your fridge or mobile network) for real-time monitoring and predictive maintenance.

**Content Creation:** Using AI to generate technical content, such as articles, programming code, documentation and marketing materials.

It's also worth keeping an eye on these early-stage ideas, which could revolutionise data and insight:

**Brain-Inspired Hardware:** Developing hardware that mimics the structure and function of the human brain for advanced data analysis and machine learning tasks, e.g. in pattern recognition.

**DNA-Based Data Storage:** Storing vast amounts of data using DNA molecules and preserving data for extended periods.

**Synthetic Data Generation:** Enhancing existing datasets with artificial data that mimics characteristics of real-world data to improve model performance.

**Human-Machine Collaboration:** Combining human expertise with AI to make better decisions, e.g., guidance and feedback, AI-assisted humans.

# OUR RECOMMENDED APPROACH



## Discover

Using our own maturity model, we can assess opportunities in data and insight or focus on specific areas of challenge or opportunity that the client has already identified. Part of this is typical mapping the as-is-across data management and insight capabilities, such as data architecture, governance, analytics tools and operating models.



## Recommend

Based on the target capability for data and/or insight, we can design the 'to be' to deliver the identified opportunities. This can be at a high level, or a detailed solution level as required. We are data technology agnostic, meaning we offer an independent view. This is 'use case' driven, aiming to deliver recommendations with tangible commercial benefits.



## Prioritise

Within recommendations there will always be a range of benefits and costs. We will help drive out the prioritisation of quick wins versus longer term capability. We can also help build benefits cases in more detail for investment sign off if required.



## Roadmap

The interlock with other areas of change within the organisation is critical. Particularly in the data management area, upstream change can impact plans. Data management is typically a big dependency for downstream areas.



## Deliver

We can resource a bespoke team for you to move through delivery, including experience business change leads to drive the overall programme. Typical skillsets include data architecture, business analysis, data governance and data analysis.



## Embed

Almost all business change requires a focus on 'people' and 'process' elements. At the very least change in data and insight capability from a technology or strategy point of view, requires new people after it has been 'delivered' to run the capability. As well as organisation & operating model design, we have an extensive resourcing capability that enables you to put permanent team changes in place.

# DATA AND INSIGHT: EXAMPLE SKILLS



## Data management

Strategy & Governance

Architecture & Modelling

Engineering & Development

Platforming & Storage

Pipelines & ETL/ELT

InfoSec & GDPR



## Analytics & Data Science toolset

Traditional analytics: SAS & SQL

Digital analytics: Google,

Adobe & Omniture

Data Science: R, Python & Spark



## Techniques

Basket analysis

RFV/RFM & propensity models

Segmentation

Campaign & A/B evaluation

Attribution & econometrics

Lifetime value LTV

Commercial forecasting

Machine learning, regression,  
probabilistic & factor analysis



## BI, Reporting & visualisation :

Business Objects, Oracle BI

Power BI, Qlik Sense, Tableau

Looker, D3.js

# WE ARE HERE TO HELP YOU

Our aim is to grow our client's customer value. We help brands organise and use data to make decisions and automate technology to execute them.

There's a lot of pieces to that puzzle of course. Our 9-box capability model reflects the building blocks that make up effective management of your customer base.

The core principles of being customer and insight led have not changed, but there's been a rapid change in technology and the art of the possible.

This has huge implications for the capability needed in an organisation – from marketing right through to technology, data and people.

We're not just consultants; we've sat your side of the table working for some of the biggest brands across the world and faced the same challenges as you are today.

That's why we've designed a business around delivering & embedding real change that sticks, not just imparting theory.

It also means we are best placed to offer direct expertise and build teams of practitioners to help you realise your opportunity based on practical experience – and support for the whole journey if you need it.



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